GRILLES

PERFORATED (METAL

The HARRINGTON & KING PERFORATING CO. Digitized by:



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GRILLES

PERFORATED METAL

A Catalog and Hand Book

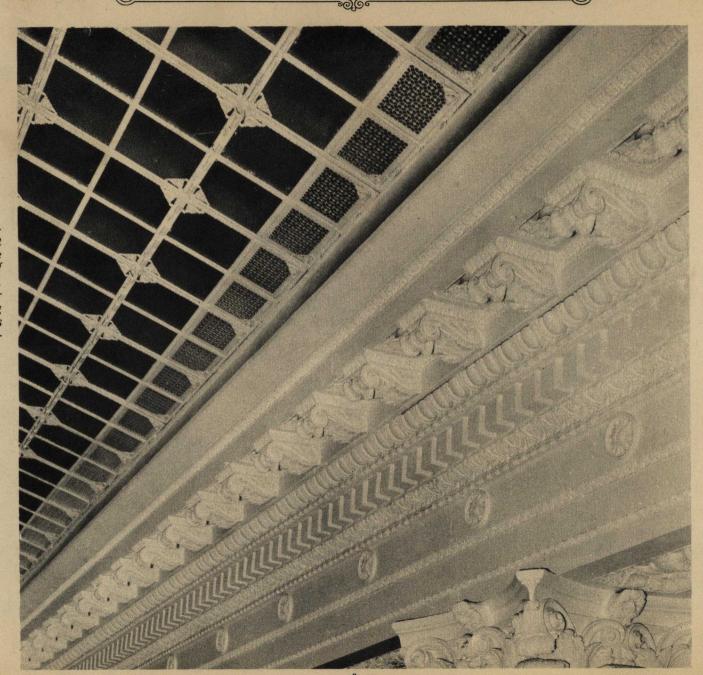
Issue No. 28

THE HARRINGTON & KING PERFORATING CO.

Office and Factory: 5655 Fillmore St. CHICAGO

Eastern Sales Office: 114 Liberty St. NEW YORK

Copyrighted 1928
The Harrington & King Perforating Co.
Chicago



First National Bank, Chicago

A section of the inside glass skylight around which there are 136 grilles of our style M Design. This skylight is over the main banking floor and the grilles provide for ventilation.

Leonard
Construction Co.
Chicago
Architects and
Engineers



Introduction.

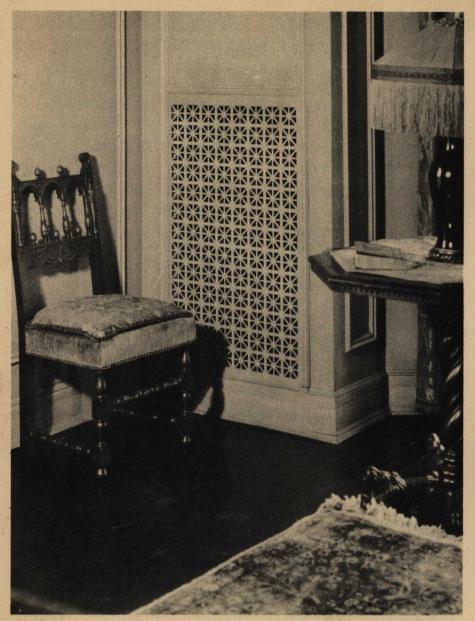
For fifty years we have devoted all of our efforts to the production of perforated metals. In 1923 we built a new plant which embodies every improvement not only of actual plant construction but of modern factory equipment and layout for greatest efficiency and economy of production. It is the largest and finest plant in this country devoted exclusively to the production of perforated metals and we know of none better or larger in the world.

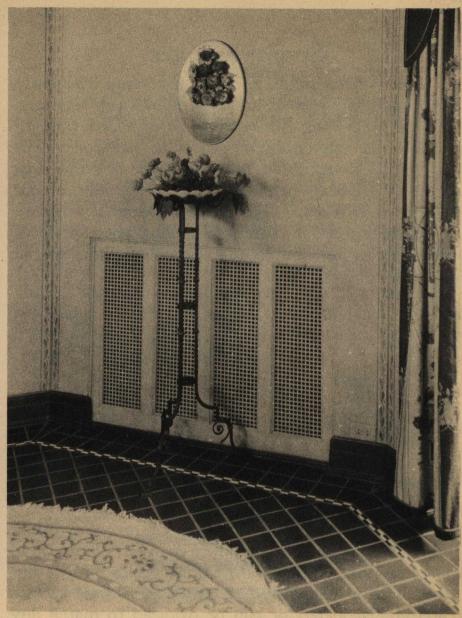
In this new plant special facilities have been provided for the manufacture of Grilles of Perforated Metal. Grilles must be accurate in design, size and shape. They must be absolutely flat. They must be finished without flaw or blemish. Many grilles must have screw holes carefully located, frames made to special measurements, invisible hand hole doors, register shutters and other attachments accurately fitted. Our facilities have been carefully perfected and we are today furnishing a greater selection of punched grille designs which are produced with greater care and finer finish than have ever before been obtainable.

Our grilles are made by punching the designs in sheets and plates of solid steel, bronze, brass and other metals. They are not brittle as are cast grilles, they are not flimsy as are pressed grilles, but are rugged and substantial in appearance and in actual strength. Because of the process of manufacture as well as our complete facilities, the cost of our Grilles of perforated Metal is only a fraction of the cost of cast grilles. To the greater strength, lesser cost, and artistic appearance of our grilles must be added our absolute guarantee of workmanship and the excellence of service and promptness of delivery which grille shipments require.

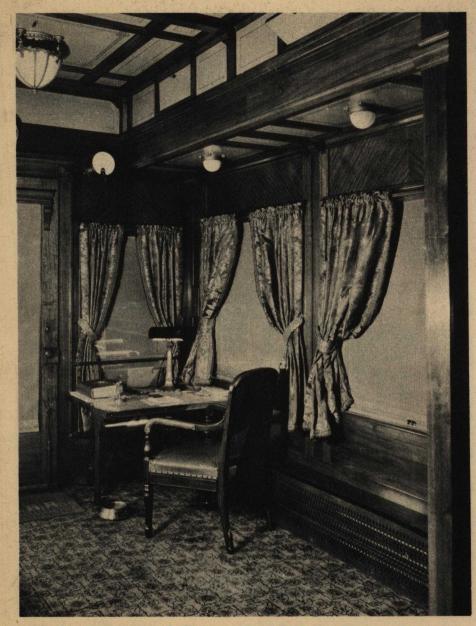
The creation of new designs which we wished to present to our rapidly increasing circle of users and the desire to compile a hand book of grille information which would be of real value to architects, engineers and contractors has prompted us to offer this, our third edition of GRILLES OF PERFORATED METAL.







Residence of Neil C. Hurley, River Fbrest, Ill., Philip B. Maher, Architect.

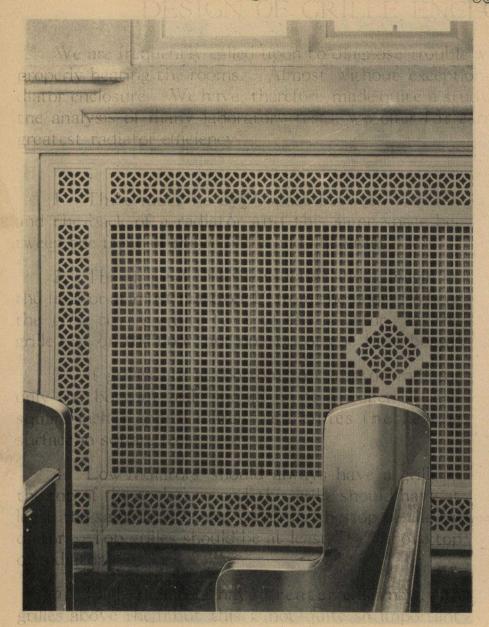


Grilles in President's Private Car, Chicago & Alton Railroad



Grilles in the Winter Garden on the Steamship Leviathan

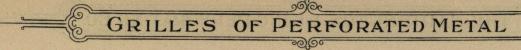




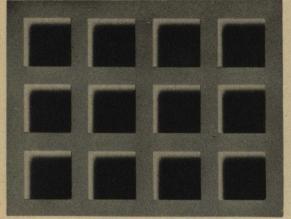
as with low ra Typical church installation.

Special grilles in a library



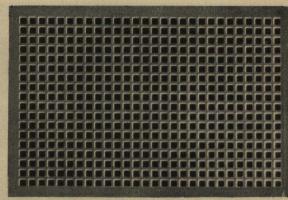


1/2" PLAIN LATTICE SPECIAL 3/16" BRIDGES

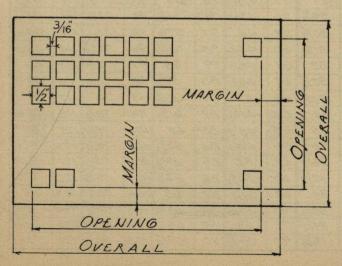


ACTUAL SIZE-1/2" PLAIN LATTICE SPECIAL 53% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN OROERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



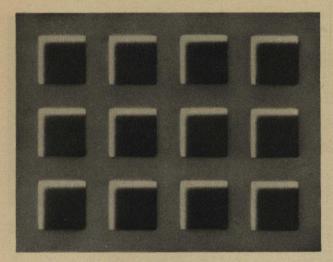
1/2" PLAIN LATTICE SPECIAL 3/16" BRIDGES 53% OPEN



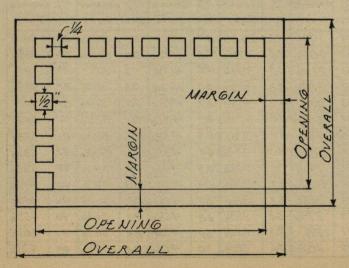
B203 D30	NO OF OLES	OPENING SIZES	NO OF HOLES	OPENING SIZES		OPENING		OPENING SIZES			100000000000000000000000000000000000000	OPENING SIZES	Ur	OPENING
"	OLLS										HOLES		HULES	
L	1	1/2"	15	1018	29	193/4	43	293/8	57	39"	71	48%	85	5814
L	2	13/16"	16	103/6	30	201/6	44	301/6	58	391/16	72	495/16	86	58'5/6
	3	17/8"	17	111/2"	31	211/8	45	3034	59	403/8	73	50"	87	595%
L	4	29/16	18	123/16	32	213/6		3/7/16	60	411/16	74	501/16	88	605/16
L	5	314"	19	121/8	33	221/2"		321/8	61	413/4	75	5/3/8	89	61"
	6	315/6	20	13%	34	233/6	48	3213/6	62	427/16	76	52 1/16	90	611/6"
	7	45/8	21	141/4	35	231/8	49	33½"	63	431/8	77	523/4	91	623/8"
	8	55/16	22	14 15/6	36	24%		343/6	64	43%	78	531/6	92	631/6"
	9	6"	23	155/8	37	251/4	51	341/8"	65	441/2	79	541/8	93	6334"
	10	6 1/16	24	165/16	38	2515/16	52	35%	66	453/16	80	543/6	94	647/16
L	11	73/8"	25	17"	39	265/8	53	36'4"	67	451/8	81	551/2"	95	651/8
	12	81/16	26	171/16	40	275/16	54	3615/6	68	469/16	82	563/6	96	6513/16
	13	834	27	183/8	41	28"	55	375/8"	69	4714"	83	56 7/8"	97	661/2"
L	14	97/6	28	191/16	42	281/16	56	385/6	70	4715/6	84	579/16	98	673/16



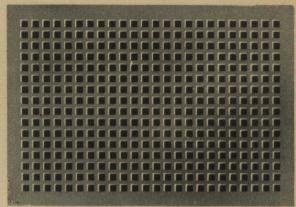
1/2" PLAIN LATTICE GRILLE



A@TUAL SIZE 1/2 HOLES, 1/4" BRIDGES, 45% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GRUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

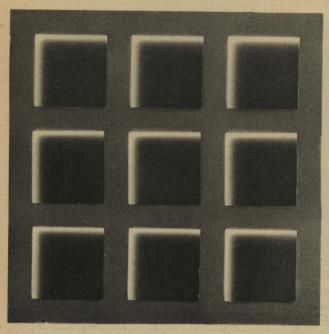


1/2" PLAIN LATTICE GRILLE 450/0 OPEN

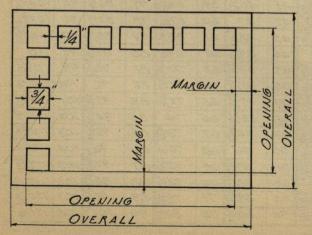
No OF HOLES		HOLES	OPENING SIZES	No OF HOLES	OPENING SIZES								
1	1/2"	19	14 "	37	27/2	55	41"	73	54/2	91	68 '	109	81/2
2	1/4	20	143/4	38	28/4	56	4134	74	55/4	92	6834	110	821/4
3	2"	21	151/2	39	29 "	57	421/2	75	56"	93	69/2	111	83 "
4	23/4"	22	16/4	40	293/4	58	43/4	76	5634	94	7014	112	833/4
5	31/2"	23	17"	41	301/2	59	44"	77	57/2	95	71"	113	841/2
6	414"	24	1734	42	31/4	60	4434	78	581/4	96	7/3/2	114	851/4
7	5"	25	181/2	43	32"	61	451/2	79	59"	97	721/2	115	86 "
8	534	26	19/4	44	323/4	62	46/4	80	593/4	98	73/4	116	8634
9	6/2	27	20"	45	331/2	63	47"	81	60/2	99	74"	117	871/2
10	7/4"	28	20/4	46	34/4	64	473/4	82	61/4	100	7434	118	881/4
11	8"	29	21/2	47	35 "	65	481/2	83	62"	101	75/2	119	89 "
12	834	30	22/4	48	353/4	66	49/4	84	623/4	102	761/4	120	8934
13	91/2"	31	23"	49	361/2	67	50"	85	631/2	103	77"	121	901/2
14	104	32	233/4	50	37/4	68	503/4	86	64/4	104	7734	122	91/4
15	// "	33	24/2	51	38 "	69	51/2	87	65"	105	781/2	123	92"
16	1134	34	251/4	52	3834	70	52/4	88	6534	106	79/4	120	923/4
17	121/2	35	26"	53	391/2	71	53 "	89	661/2	107	80"	125	931/2
18	13/4	36	263/4	54	40/4	72	5334	90	67/4	108	803/4	126	94/4



3/4" PLAIN LATTICE GRILLE

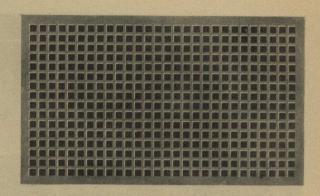


ACTUAL SIZE 3/4" HOLES, 1/4" BRIDGES. 570/0 OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.

WIDTH AND HEIGHT.

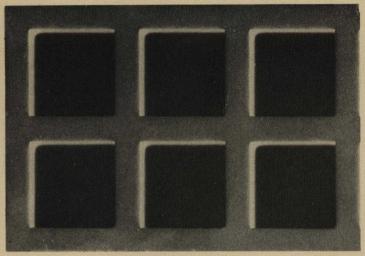


3/4" PLAIN LATTICE GRILLE 57 0/0 OPEN

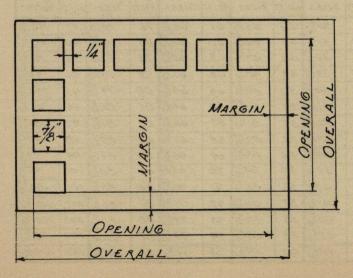
NO OF HOLES	CPENING SIZES	NO OF HOLES	OPENING SIZES	HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES
1	3/4"	16	153/4	3/	303/4	46	453/4	61	6034		7534	91	90%
2	134	17	1634	32	313/4	47	4634	62	6134	77	7634	92	913
3	23/4	18	1734	33	323/4	48	4734	63	6234	78	7734	93	923
4	334"	19	1834	34	333/4	49	483/4	64	6334	79	783/4	94	93-
5	43/4	20	1934	35	343/4	50	4934	65	643	80	7934	95	94:
6	534	21	203/4	36	35%	51	503/4	66	6534	81	80%	96	95
7	634	22	213/4	37	3634	52	5/3/4	67	6634	82	8134	97	967
8	734	23	223/2	38	3734	53	5234	68	67%	83	823	98	97
9	83/4	24	2334	39	3834	54	5334	69	683/4	84	833/4	99	98
10	93/4	25	243/4	40	3934	55	5434	70	693/4	85	8434	100	99
11	1034	26	253/4	41	4034	56	5534	71	7034	86	8534	101	100
12	1134	27	2634	42	413/4	57	563/4	72	7/3/4	87	8634	102	1013/
13	1234	28	273/4	43	423/4	58	5734	73	723/4	88	8734	103	1023/
14	1334	29	283/4	44	4334	59	583/4	74	7334	89	8834	104	1033/
15	1434	30	293/4	45	4434	60	593/4	75	7434	90	8934	105	1043/



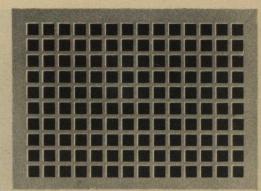
1/8" PLAIN LATTICE GRILLE



A@TUAL SIZE.
1/8" HOLES, 1/4" BRIDGES, GOGO OPEN,



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,

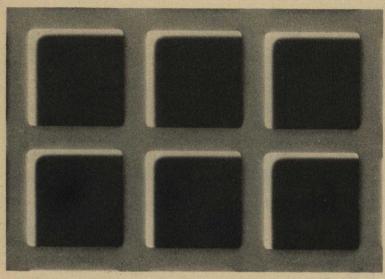


1/8" PLAIN LATTICE GRILLE 600/0 OPEN

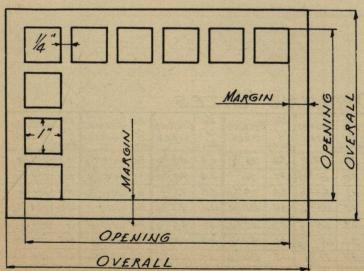
NO OF HOLES	OPENING SIZES										
HULES	78"	19	21//8"	37	413/8	55	615/8	73	81%	91	1021/6
2	2"	20	22/4	38	421/2	56	623/2	74	83 "	92	103/4
3	31/8	21	233/8	39	435%	57	6378	75	84/8	93	1043/8
4	4/4	22	24/2	40	443/4	58	65"	76	85/4	94	105/2
5	53%	23	25%	41	45%	59	661/8	77	863%	95	106 %
6	6/2	24	263/4	42	47"	60	671/4	78	87/2	96	1073/4
7	75%	25	27%	43	48%	61	683/8	79	88%	97	108%
8	834	26	29"	44	49/4	62	691/2	80	893/4	98	110 "
9	9%	27	30/8	45	503/8	63	70%		90%	99	111/8
10	11 "	28	31/4	46	51/2	64	713/4		92"	100	1121/4
11	12/8	29	323%	47	525%	65	72%	83	931/8	101	1133/8
12	13/4	30	33/2	48	533/4	66	74"	84	944	102	1141/2
13	143/8	31	34%	49	54%	67	75/8		95%	103	115 %
14	151/2	32	3534	50	56"	68	76/4		76/2	104	11634
15	16 5%	33	36%	51	57/8	69	773/8	87	9758	The second second	117%
16	173/4	34	38 "	52	58/4		781/2	88	983/4	106	119 "
17	187/8	35	39/8	53	593%	71	795/8		99%	107	1201/8
18	20	36	40/4	54	60/2	72	803/4	90	101"	108	121/4



1' PLAIN LATTICE GRILLE

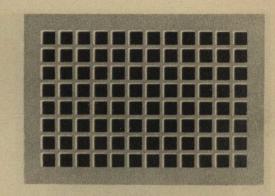


1" HOLES 1/4" BRIDGES. 71 % OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVER ALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

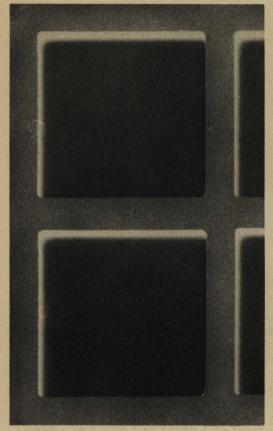


1"PLAIN LATTICE GRILLE 7100 OPEN

No OF HOLES	OPENING SIZES										
1	1"	16	193/4"	3/	38/2	46	571/4"	61	76"	76	943/4
2	21/4"	17	21"	32	393/4	47	58/2	62	77/4	77	96"
3	31/2"	18	22/4	33	41"	48	5934"	63	781/2	78	97/4
4	43/4"	19	231/2"	34	42/4	49	61"	64	7934"	79	9812
5	6"	20	243/4	35	431/2	50	621/4	65	81"	80	993/4
6	7/4	21	26"	36	443/4	51	631/2	66	821/4	8/	101"
7	8/2"	22	27/4	37	46"	52	6434	67	83//2	82	102/4
8	93/4"	23	281/2	38	47/4"	53	66"	68	843/4	83	103 1/2
9	11"	24	293/4"	39	481/2	54	67/4	69	86"	84	1043/4
10	12/4"	25	3/"	40	4934	55	68/2"	70	87/4	85	106"
11	131/2"	26	321/4"	41	51"	56	693/4	71	881/2	86	107//4
12	1434"	27	33/2	42	52/4	57	71"	72	893/4	87	108/2"
13	16"	28	3434	43	531/2	58	72/4"	73	91"	88	1093/4
14	17/4"	29	36"	44	5434	59	73/2	74	92/4	89	111"
15	18/2"	30	37/4"	45	56"	60	743/4	75	93/2	90	1121/4



13/4 PLAIN LATTICE GRILLE



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:

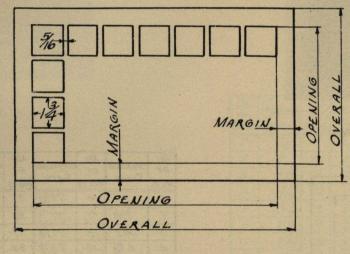
DIMENSIONS, OPENINGOR OVERALL.

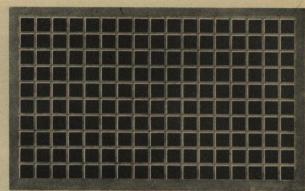
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

KIND OF FINISH,

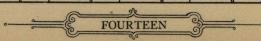




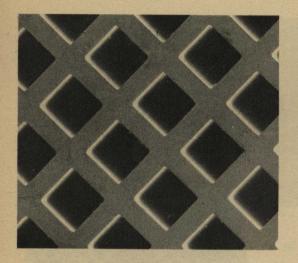
13/4-PLAIN LATTICE, 72 0/0 OPEN

ACTUAL SIZE 13/4 HOLES, 5/16 BRIDGES, 7240 OPEN

1	No OF HOLES	OPENING SIZES	DI	OPENING SIZES	DF	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES		OPENING SIZES		OPENING SIZES		OPENING SIZES	NO OF HOLES	OPENING SIZES
	1	134"	8	163/6	15	305/8"	22	451/6	29	59/2	36	73 76	43	883/8	50	10213/6	57	117/4"
	2	313/16	9	1814	16	321/6	23	47/8"	30	619/16	37	76 "	44	907/6	51	104 78	58	1195/6
	3	578"	10	20 5/6	17	3434"	24	493/6	31	6358	38	781/6	45	921/2"	52	106 15/6	59	1213/8"
	4	7196"	11	223/8	18	36 36	25	51/4"	32	651/16	39	8018	46	94%	53	109 .	60	1237/16
	5	10"	12	241/6	19	3878	26	535/6	33	673/4"	40	823/6	47	96 5/8	54	111/16	61	125/2"
	6	121/16"		261/2"		401%		5538	34	6913/6	41	84/4"	48	981/16		1131/8"		1279/16
L	7	14/8	14	28%	21	43 "	28	577/6	35	7178"	42	865/16	49	1003/4"	56	1153/6	63	129 5/8

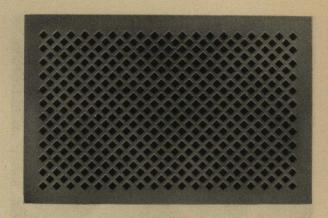


1/2 DIAGONAL LATTICE GRILLE

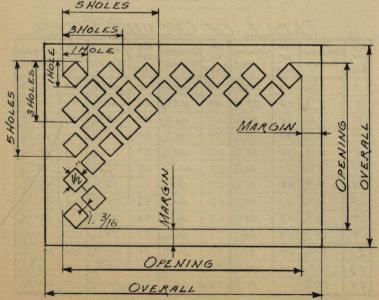


ACTUAL SIZE 1/2" HOLES, 3/16" BRIDGES, 53 40 OPEN

NOTE
OPENING. SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN OR OERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



12 DIAGONAL LATTICE GRILLE 530/0 OPEN

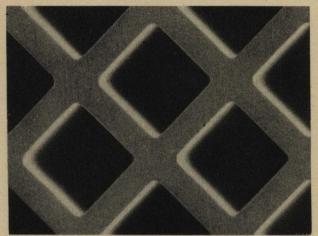


No OF HOLES	OPENING SIZES								
1	1/16	23	111/16	45	221/6	67	331/16	89	441/16
3	11/16	25	121/16	47	231/16	69	341/16	91	451/16
5	21/16	27	131/16	49	241/16	71	351/16	93	461/6
7	31/16	29	141/16	51	251/16	73	36 1/16	95	471/16
9	41/16	31	151/16	53	261/6	75	371/6	97	481/16
11	51/16	33	161/16	55	27 1/16	77	381/16	99	491/16
13	6 1/16	35	171/16	57	281/16	79	391/16	101	501/6
15	71/16	37	181/16	59	291/16	81	401/16	103	511/6
17	81/16	39	191/16	61	301/16	83	41416	105	521/6
19	91/16	41	201/6	63	311/16	85	421/16	107	531/6
21	701/16	43	211/16	65	321/16	87	431/16	109	541/16



78 DIAGONAL LATTICE GRILLE

SIXTEEN



ACTUAL SIZE 7/8 HOLES, 1/4" DRIDGES 60 0/0 OPEN

NOTE OPENING SIZES MUST CORRESPOND WITH TABLE BUT WIDTH OF MARGINS MAY BE VARIED TO OBTAIN CORRECT OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:

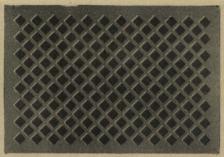
DIMENSIONS, OPENINGOR OVERALL.

MINIMUM MARGINS.

KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

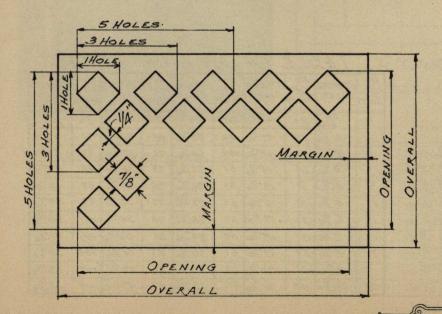
KIND OF FINISH.



7/8 DIAGONAL LATTICE GNILLE

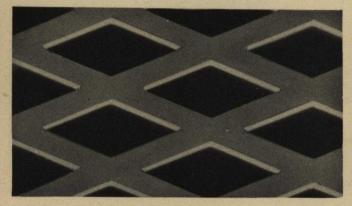


7/8 DIAGONAL-LATTICE GRILLE PART HOLES, NOT FURNISHED UNLESS SPECIFIED



_				A AND DESCRIPTION			000	,	
NO OF HOLES	OPENING SIZES								
1	13/16	27	22 3/6	53	437/16	79	64%	105	851/6
3	213/16	29	23/16	55	451/6	81	663/6	107	875/16
5	47/16	31	25%	57	461/6	83	67176	109	8815/6
7	6/16	33	273/6	59	485/6	85	697/6	111	90%
9	71/16	35	28/3/6	61	49/16	87	71/16	113	923/6
11	95/16	37	3076	63	519/16	89	721/6	115	9313/6
13	10'5/16	39	321/6	65	533/16	91	74 %	117	957/6
15	129/6	41	331/16	67	54/16	93	75/96	119	97/16
17	143/16	43	35%	69	567/6	95	77%6	121	981/16
19	1513/16	45	3676	71	58/16	97	793/6	123	100 5/6
21	17/16	47	38%	73	591/16	99	80%	125	1011/6
23	19/16	49	463/6	75	615/16	101	827/6	127	1039/16
25	201/6	51	413/6	77	62/16	103	84/16	129	1053/6

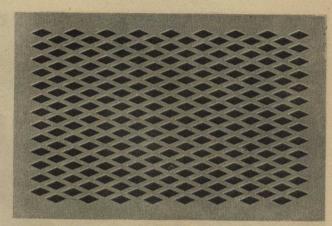
STYLE-E. GRILLE



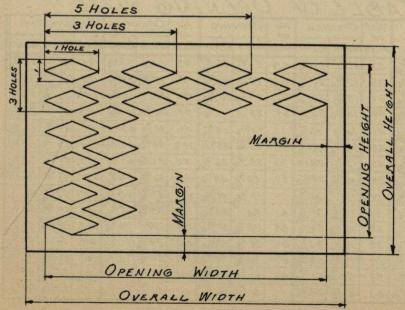
STYLE-E- 52 of OPEN

NOTE OPENING SIZES MUST CORRESPOND WITH TABLE BUT WIDTH OF MARGINS MAY BE VARIED TO OBTAIN CORRECT OVER ALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.
WIDTH AND HEIGHT.



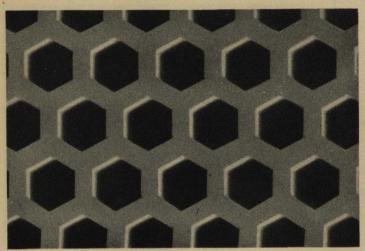
STYLE-E- 5200 OPEN



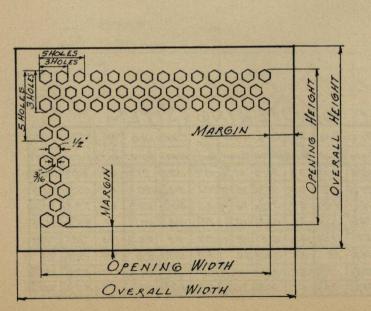
No	OPEN		No		VING	No	OPE	VING	No	OPEN	ING	No	OPE	VING
HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIOTH	HEIGHT
1	1/2"	5/8"	17	18/2	75/8	33	35/2	14%	49	52/2	21%	65	69/2	285/
3	3%	1/2	19	20%	8/2	35	375%	15/2	51	54%	-	AND DESCRIPTION OF THE PERSON NAMED IN	715%	291/2
5	534	23%	21	223/4	938	37	393/4	163/8	53	563/4	23%	69	733/	303/
7	77/8	3/4	23	241/8	10/4	39	41/8	17/4	55	58%	24/4	7/	75/8	31/4
9	10"	4/8	25	27"	11/8	41	44"	181/8	57	61"	25/8	73	78"	321/8
11	12/8	5"	27	29/8"	12	43	46/8	19	59	63/8	26"	75	80/8	33"
/3	14/4	578	29	31/4	12%	45	4814	1978	61			77	, ,	337/8
15	163/8	63/4	31	333/8	1334	47	50%	203/4	63	6738	273/2	79	843%	343/



STYLE-B-GRILLE HEXAGON

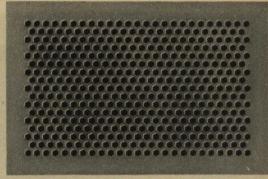


ACTUAL SIZE STYLE-B-



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH OIMENSIONS REPRESENT.

WIDTH AND HEIGHT.

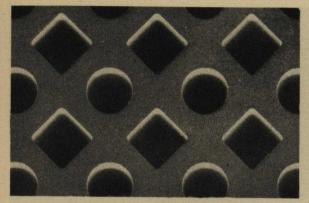


STYLE-B. 53 % OPEN

No OF	OPEN	ING	No	OPEN	ING	No	OPEN	ING	No	OPEN	VING	No	OPEN	ING
	WIDTH	HEIGHT					WIOTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIDTH	HEIGHT
3	13/16	113/6	33	11/2"	20%	63		39 %			581/6		42 7/6	
5	17/8"	31/16	35	123/16	21/3/6	65		40%					43 18	
7		45/16	37		231/16			41916					43 13/6	
9		59/16		139/16	245/6	69	STATE OF THE PARTY OF	43/16	Contraction State					80%6
11	315/6	613/16	41	141/4"	25%		249/16							81 13/6
13	45/8	8/16	43	141%	26 3/16	73		45%						831/16
15	5 5/6	95/16	45	155/8		Section 1997	_	4696						84 9/6
17	6"	10%	47	16 5/16	295/6			48/16	The state of the s	3615/6			COMPANIES NAMED IN	85 %6
19	61/16	11/3/16	49	17 "	30%			49 5/16			681/6			86 3/6
21		13/16"	51		31/3/6			50%6			69916			881/6
23		145/16			33/16			51 3/6		39"				895/6
25		159/16			345/16			53/16			713/6		The second second	90%
27		16 3/6		-	35%	-		545/6			73/16		STATE OF THE PERSON NAMED IN	913/6
29		18/16			36/3/6	-	-	55 %6	-		745/16			931/16
31	10/16	19 5/16	61	21/8	38/16	91	31/16	56 76	121	413/4	75 %	151	52/16	945/16



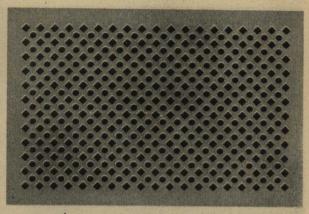
STYLE -G-GRILLE ROUND AND SQUARE HOLE DESIGN



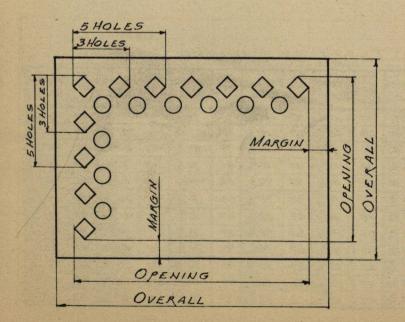
ACTUAL SIZE STYLE-G-43 0/0 OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVER ALL DIMENSIONS.
WHEN OR DERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

NINETEEN

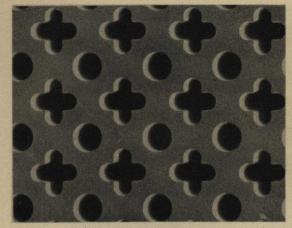


STYLE-G- 43 Of OPEN



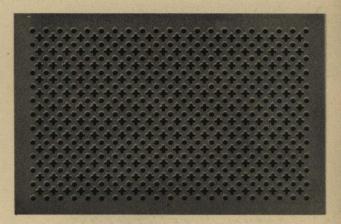
No OF HOLES	OPENING SIZES										
3	15/8	23	115/8"	43	215/8	63	3/5/8"	83	415/8	103	515/8
5	2 5/8	25	12 98	45	22 5/8	65	32 5/8"	85	42 98	105	52 5/8"
7	35/8	27	13 5/8	47	23 5/8"	67	33 98	87	43 98	107	535/8
9	45/8	29	145/8"	49	245/8"	69	345/8	89	44 %	109	54 5/8
11	55/8	31	155/8	51	25 5/8"	71	35 98	91	45 5/8"	111	55 5/8
13	65/8	33	165/8	53	26 5/8"	73	365/8	93	465/8	113	565/8"
15	75/8	35	175/8	55	275/8"	75	375/8"	95	47 5/8"	115	575/8
17	85/8"	37	18 5/8"	57	28 5/8"	77	38-5/8"	97	48 5/8"	117	58 5/8
19	95/8	39	19 5/8	59	29 5/8"	79	395/8"	99	495/8"	119	595/8
21	10%	41	20 5/8"	61	30 5/8	81	40 5/8	101	505/8"	121	605/8

STYLE - I GRILLE CLOVERLEAF E ROUND

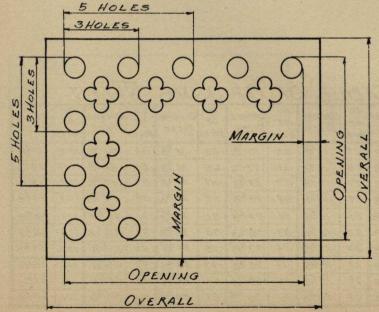


ACTUAL SIZE, STYLE-I-40% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS
WHEN OR OERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



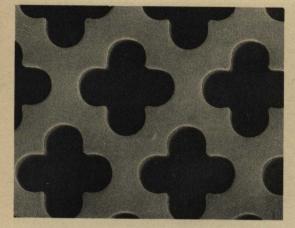
STYLE -1- 40 % OPEN



No OF HOLES	OPENING SIZE										
3	1/16	27	10/16	51	191/6	75	28/16	99	37/16	123	46/16
5	1/3/16	29	1013/16	53	1913/6	77	28/3/6	101	37/36	125	4613/6
7	29/16	31	119/16	55	20%	79	29%	103	38%	127	47%6
9	35/16	33	125/6	57	21/16	81	307/6	105	39916	129	48 7/6
11	4/16	35	13/16	59	22/16	83	31/16	107	40/16	131	49/16
13	413/6	37	13/3/6	61	22/3/6	85	31/16	109	401%	133	49/3/6
15	5%6	39	14%	63	23%	87	32%	111	419/16	135	50%
17	67/6	41	15 %	65	24 7/6	89	33 5/6	113	427/6	137	515/16
19	7/16	43	16/16	67	25/16	91	34/16	115	43/16	139	52/16
21	7'3/6	45	16 7/6	69	25 13%	93	343/6	117	43 316	141	52136
23	8%	47	179/6	71	269/6		359/16	119	44%	143	53%6
25	9 5/16	49	185/16	73	27%6	97	36 7/6	121	45 5/6	145	54916

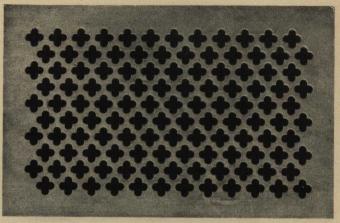


STYLE-F- GRILLE CLOVER LEAF

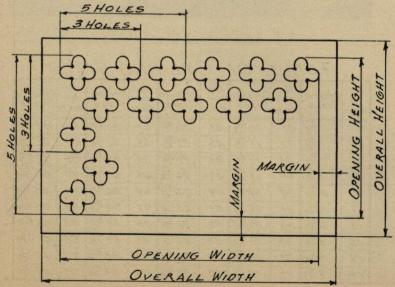


ACTUAL STYLE -F-45% OPEN

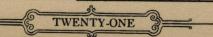
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.
WIDTH AND HEIGHT.



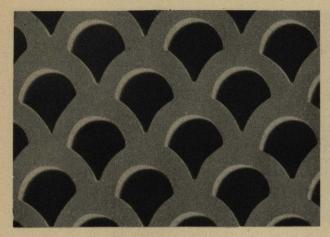
STYLE -F- 45% OPEN



		,	TAL	BLE	0	F	OPI	ENI	NO	5 5	SIZ	ES	·	
No OF	OPEN	ING	NO OF	OPE	NING	No OF	OPE 512	NING	No OF		NING	No OF	OPEI	VING ES
HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT
1	/"	/ "	23	143/	20/4	45	28/2	391/2	67	42/4	583/4	89	56"	78"
3	2/4	23/4	25	16"	22"	47	293/4	41/4	69	431/2	601/2	91	571/4	793/4
5	31/2	41/2	27	174	2334	49	3/"	43"	71	44%	621/4	93	581/2	
7	43/4	6/4	29	181/2	251/2	51	32/4	443	73	46"	64	95	593/4	
9	6.	8"	31	193/4	27/4	53	33%		75	47/4	65%	97	61"	85"
11	7/4	934"	33	21"	29"	55	343/4	481/4	77	48/2		99	621/4	8637
13	8/2"	11/2	35	22/4	30%	57	36"	50	79	4934	691/4	101	631/2	
15	9省	131/2	37	231/2	321/2	59	37/4	513/4	81	51"	71"	103	643/2	901/4
17	11"	15"	39	243/4	3414	61	38/2	531/2	83	52/4	723/4	105	66"	92"
19	12/4	1634	41	26"	36"	63	393	5514	85	531/2	74/2	107	67/4	933/4
21	131/2	18/2	43	27/4	3734	65	41"	57"	87	543/	761/4	109	681/2	951/2

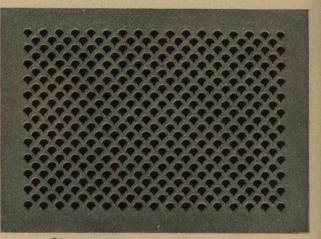


STYLE-HW-SMALL FISH SCALE

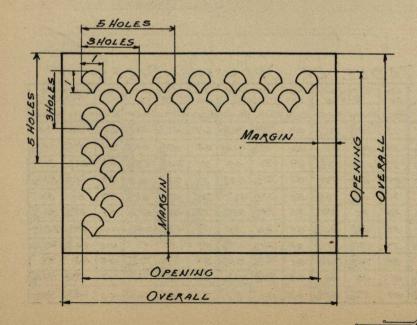


ACTUAL SIZE STYLE H.W 50 % OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.

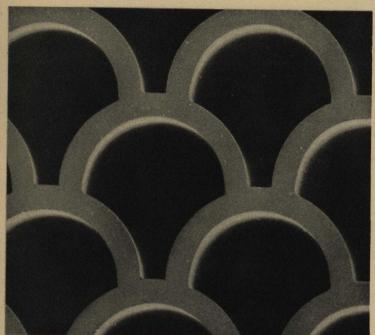


STYLE-H-W- 50 0/0 OPEN

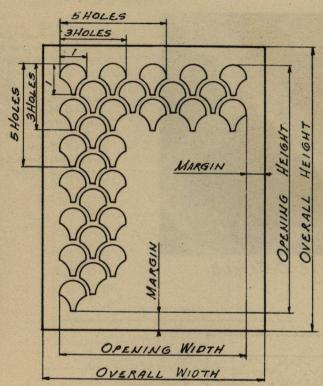


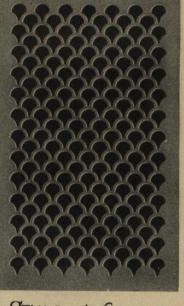
	IA	DLL	- Of	. (IPLA	//N	6 51	ZE:	S
No OF HOLES	OPENING SIZES								
1	1/8		10 %	41	20 %	61	30 5/8	81	40 5/8
3	15/8	23	1158	43	21%	63	315/8	83	415/8
5	25/8		125/8	45	225%	65	32 5/8	85	42 5/8
7	35%	27	13 98	47	23 5/8	67	335/8	87	43 5/8
9	4 %	29	145/8	49	24 5/8	69	345/8	89	44 5/8
11	5 %	31	15 5/8"	51	25 5/8	71	35 5/8	91	45 5/8
13	65/8	33	165/8	53	26 5/8	73	365/8	93	46 5/8
15	7%	35	175/8	55	275/8"	75	375/8	95	475/8
17	85%	37	1856	57	28 5/8	77	385/8	97	48 5/8
19	95%	39	1956	59	295/8	79	395/8	99	195/8

STYLE-J- GRILLE



ACTUAL SIZE, STYLE - J-





STYLE - J. GRILLE 6500 OPEN

NOTE OPENING SIZES MUST CORRESPOND

WITH TABLE BUT WIDTH OF MARGINS MAY BE VARIED TO OBTAIN CORRECT

WHEN ORDERING SPECIFY:

OVERALL DIMENSIONS.

TABLE OF OPENING SIZES

No OF	OPEN		No	The state of the s	NING		OPEN		No	OPEN		No	OPEN	IING	No	OPEN		.1/0	OPEN	IING
HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT
1	12	13/4	15	17/4	1534	29	33"	29 4		4834	43%	57		5734		80/4			96	853
3	33/4	STREET, STREET	The second second		173/4			3134		51	453/4	59	663/4	593/4	73	82/2	733/4	87	984	873
5	6	53/4	Control Control Control	2134	193/4	San		33%		53/4	473/4	61	69"	6134			75%			893
7	814	73/4	the latest and the latest and the	24"	District States at	CALIFORNIA CONTRACTOR	3934	3534	49	55/2	4934	63	71/4	633/2		87"	7734	CONTRACTOR OF STREET	1023/4	Section of the last
9	10/2	STATE OF THE PARTY	and the same of th		23/4	Name and Address of the Owner, where	42 "	3734	51	573/4	5134	65	731/2	653/4	79	891/2	793/4		105	933/4
11	1234			28/2	2534		444	3934	53	60	533/4	67		6734			813/4	_	107/2	953/4
13	15"	133/4	27	30%	273/4	41	461/2	413/4	55	62/4	55多	69		693/4						973/4

DIMENSIONS, OPENINGOR OVERALL.

MINIMUM MARGINS,

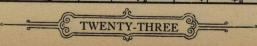
KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

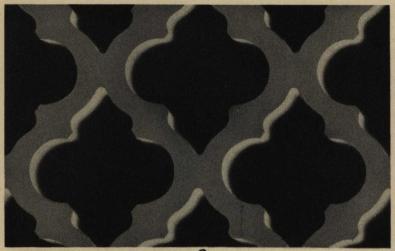
KIND OF FINISH,

WHICH DIMENSIONS REPRESENT,

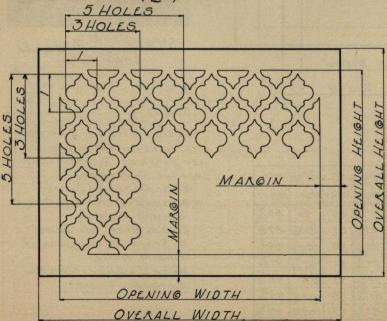
WIDTH AND HEIGHT.



STYLE -C- GRILLE GOTHIC DESIGN (LARGE)



ACTUAL SIZE STYLE-C-GRILLE 72 % OPEN



NOTE OPENING SIZES MUST CORRESPOND WITH TABLE BUT WIOTH OF MARBINS MAY BE VARIED TO OBTAIN CORRECT OVERALL DIMENSIONS.

WHEN OR DERING SPECIFY:

DIMENSIONS, OPENING OR OVERALL.

MINIMUM MARGINS.

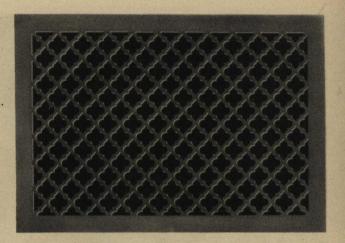
KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

KIND OF FINISH,

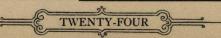
WHICH DIMENSIONS REPRESENT.

WIOTH AND HEIGHT.



STYLE - C- GRILLE 72 0/0 OPEN

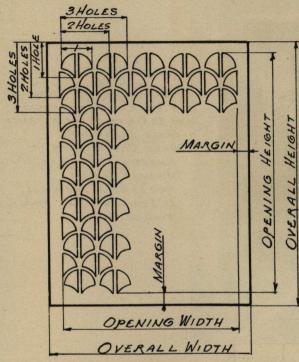
No	OPEN	ING	No	OPEN	IING	No	OPEN	ING	No	OPEN	IING	No	OPEN	ING
HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT
1	1/2	13/4"	21	21/2"	23"	41	41/2	44/4	61	61/2	65/2	81	811/2	863/4
3	31/2	3%	23	23//2	251/8	43	431/2	463/8	63	631/2	67%	83	83/2	881/8
5	5/2	6 "	25	25/2	27/4	45	45//2	481/2	65	651/2	6934	85	851/2	91 "
7	7/2	8/8	27	27/2	293/8	47	47/2	50%	67	67/2	7/1/8	87	871/2	93/8
9	91/2	10/4	29	291/2	31/2	49	49/2	523/4	69	69/2	74	89	89/2	95/4
11	11/2	123/8	31	31/2	3358	51	51/2	54%	71	711/2	76/8	91	911/2	9738
13	131/2"	14/2	33	331/2	3534	53	531/2	57"	73	73//2	78/4	93	931/2	991/2
15	151/2"	16%	35	351/2	37%	55	551/2	591/8	75	751/2	803	95	95/2	1015/8
17	17/2	183/4	37	37/2	40"	57	57/2	61/4	77	771/2	821/2	97	97/2"	1033/
19	19/2	20%	39	391/2	421/8	59	591/2	6336	79	791/2	845%	99	991/2	10578

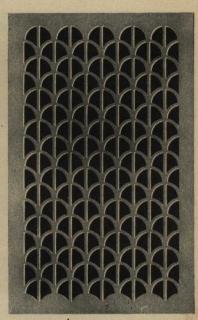


STYLE-Q-GRILLE

DIVIDED FISH SCALE







STYLE-Q 65 0/0 - OPEN

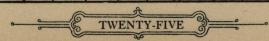
ACTUAL SIZE STYLE-Q-65 % OPEN NO OPEN

TABLE OF OPENING SIZES

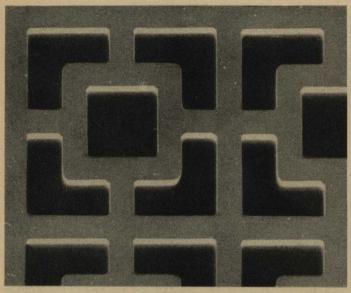
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN OR DERING SOCRES.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

No	OPEN	ING	No	OPEN	NING	No	OPE.	NING	No OF	OPE.	NING	No	OPE	NING	No OF	OPER	VING	No OF	OPEN	IING
HOLES	WIOTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIDTH	HEIGHT	HOLES	WIOTH	HEIGHT	HOLES	WIOTH	HEIGHT		WIDTH	HEIGHT	1000	WIDTH	HEIGH
1	23/4	2.	11	173/4	17"	21	323/	32	31	47%	47	41	6234	62	51	7734	77	61	923/4	92 "
2	414	3/2	12	19/4	181/2	22	34/4	331/2	32	49/4	481/2	42	64/4	63/2	52	79/4	18/2	62	9414	931/2
3	53/4	5"	13	203/4	20"	23	3534	35	33	503/	50	43	6534	65	53	803/4	80	63	9534	95
4	7/4	61/2	14	221/4	21/2	24	37/4	361/2	34	521/4	511/2	44	67/4	66/2	54	82/4	81/2	64	974	96/2
5	83/4	8"	15	233	23	25	38%	38"	35	5334	53	45	6834	68	55	8334	83"	65	983/4	98
6	10/4	91/2	16	25/4	24/2	26	4014	39/2	36	551/4	541/2	46	70/4	69/2	56	85/4	84/2	66	100/4	991/2
7	1134	11"	17	263/4	26	27	413/4	41	37	563/4	56	47	7/3/4	71 "	57	863/4	86	67	10134	101
8	131/4	121/2	18	28/4	27/2	28	43/4	42/2	38	584	57/2	48	73/4	72/2	58	88/4	87/2	68	103/4	102/2
9	1434	14"	19	293/4	29"	29	44%	44	39	593	59	49	743/4	74	59	8934	89	69	10434	104
10	16/4	15/2	20	31/4	30%	30	46/4	45/2	40	61/4	60/2	50	76/4	75/2	60	914	90/2	70	106/4	105/2



STYLE - A-GRILLE SQUARE LINK



ACTUAL SIZE STYLE - A- 520/0 OPEN

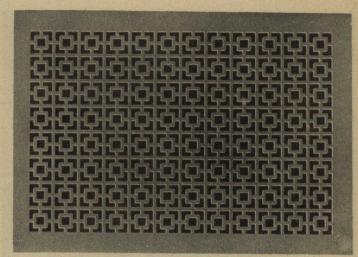
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.

DIMENSIONS, OPENING OR OVERALL MINIMUM MARGINS.

KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

KIND OF FINISH.



STYLE-A-GRILLE 520/0 OPEN

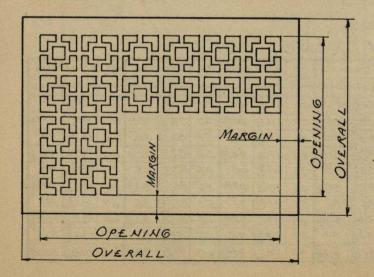
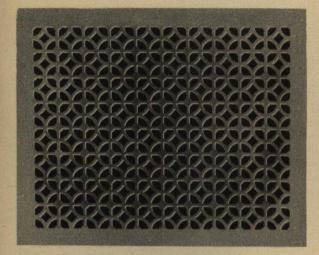


TABLE OF OPENING SIZES

No OF HOLES	OPENING SIZES	No	OPENING SIZES		OPENING SIZES								
1	2 "	8	1734	15	33/2	22	49/4	29	65"	36	803/4		961/2
2	414	9	20 "	16	3534	23	51/2	30	67/4	37	83"	44	983/4
3	6/2	10	22/4"	17	38 "	24	533/4	31	691/2	38	851/2	45	101"
4	834	11	24/2"	18	40/4	25	56"	32	7/3/4	39	871/2	46	103/4
5	11 "	12	263/4"	19	42/2	26	58/4	33	74"	40	893%	47	1051/2"
6	131/4"	13	29 "	20	4434	27	60/2	34	76/4	41	92	48	1073/4
7	15/2"	14	31/4"	21	47 "	28	6234	35	781/2	42	941/4	49	110"

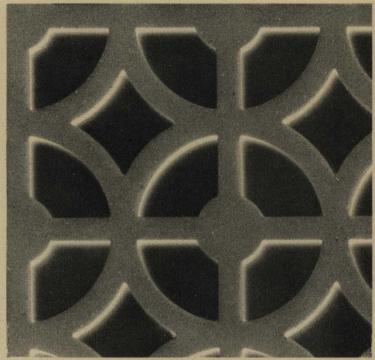
TWENTY-SIX

STYLE -M- GRILLE WHEEL DESIGN

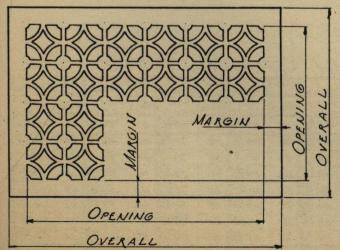


STYLE-M- 50% OPEN

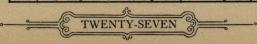
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



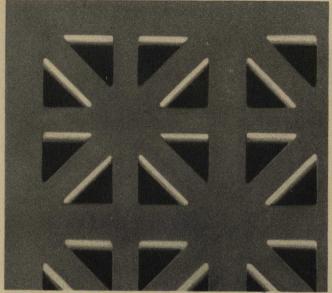
ACTUAL SIZE, STYLE-M-50% OPEN



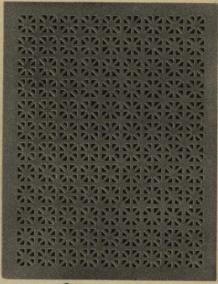
			/	AL	OLE	(OF U	PE	NIN	6.	VIZE.	5'			
NO OF HOLES	OPENING SIZES	No OF HOLES	OPENING SIZES	No of Holes	OPENING SIZES	No OF HOLES	OPENING SIZES	No OF HOLES	OPENING SIZES	No OF HOLES		No of HOLES	OPENING SIZES		NAME OF TAXABLE PARTY.
1	2"	7	151/2	13	29"	19	421/2	25	56"	31	69/2	37	83"	43	961/2
2	414	8	173/2	14	31/4	20	443/4	26	58/4	32	7134	38	851/4	44	9834
3	61/2	9	20"	15	331/2	I SURPLEMENTAL SPECIAL	47"	27	60/2		74"	39	871/2	45	101"
4	834	10	22/4	16	35%	22	49/4	28	623/4	34	76/4	40	8434	46	103/4
5	11"	11	24/2	17	38 "	23	51/2	29	65"	35	781/2	41	92"	47	105/2
.6	131/4"	12	263/4	18	40/4	24	5334	30	67/4	36	8034	42	94/4	48	10734



STYLE - LZ- GRILLE UNION JACK DESIGN 13/4" SIZE



ACTUAL SIZE STYLE-LZ 2800 OPEN NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



STYLE-LZ-28 0/0 OPEN

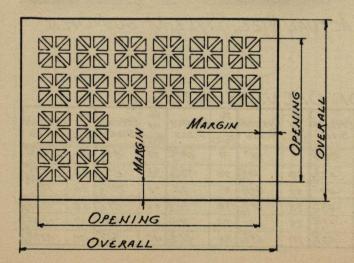
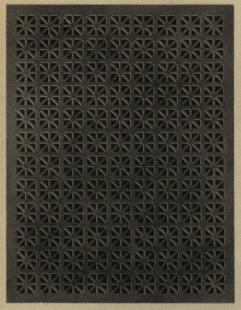


TABLE OF OPENING SIZES

No OF HOLES	OPENING SIZES	No OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES		OPENING SIZES		OPENING SIZES		OPENING SIZES		OPENING SIZES
1	13/4"	9	183/4"	17	353/4	25	523/4	33	6934	41	8634	49	1033/4
2	378"	10	201/8"	18	37%	26	541/8	34	7/7/8	42	88%	50	105/8
3	6 "	11	23 "	19	40 "	27	57 "	35	74 "	43	91 "	51	108
4	8/8	12	25/8	20	421/8	28	591/8"	36	761/8	44	931/8	52	1101/8
5	10/4	13	27/4"	21	44/4	29	61/4"	37	7814	_	95/4	53	112/4
6	123/8	14	293/8	22	463/8	30	633/8	38	803/8	46	973/8	54	1143/8
7	141/2"	15	31/2"	23	481/2	31	65/2"	39	821/2	47	991/2	55	1161/2
8	165/8	16	335/8	24	505/8	32	675/8	40	84 5/8	48	1015/8	56	118 5/8

TWENTY-EIGHT

STYLE -L- GRILLE UNION JACK DESIGN 21/2" SIZE



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:

DIMENSIONS, OPENINGOR OVERALL.

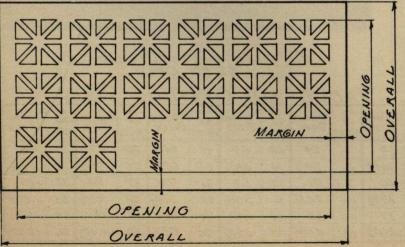
MINIMUM MARGINS.

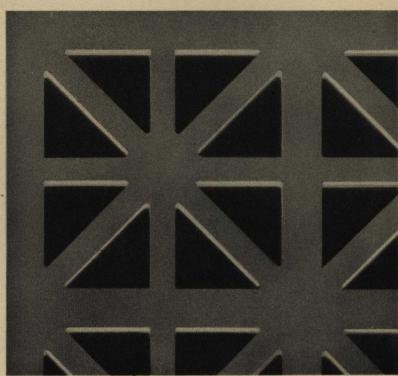
KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

KIND OF FINISH.





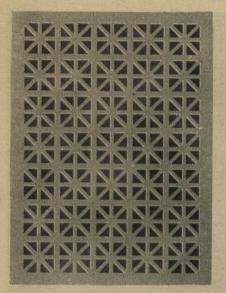


ACTUAL SIZE STYLE-L-39090 OPEN

NO OF HOLES	OPENING SIZES										
1							56/2				
2	5/2"	8	23/2	14	41/2	20	591/2	26	77/2	32	951/2
3	81/2"	9	261/2	15	441/2"	21	621/2	27	801/2	33	98/2
4	11/2	10	2912	16	47/2	22	651/2	28	831/2	34	1011/2
5	14/2	11	321/2	17	50/2	23	68/2	29	86!/2	35	104/2
6	17/2	12	351/2	18	53//2	24	71/2	30	891/2	36	1071/2



STYLE-L3. GRILLE UNION JACK DESIGN - 3" SIZE



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:

DIMENSIONS, OPENNIGOR OVERALL.

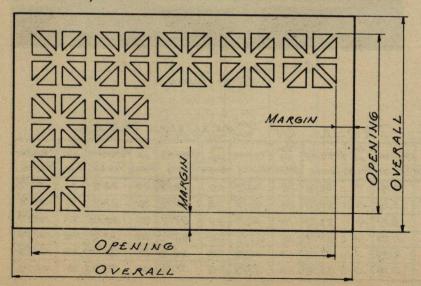
MINIMUM MARGINS.

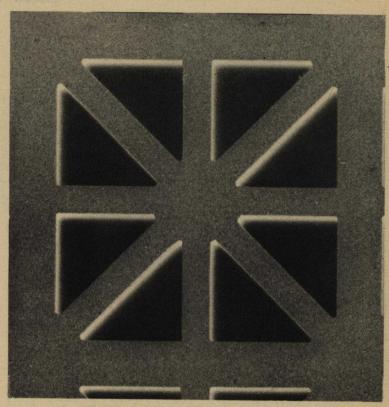
KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED,

KIND OF FINISH.

STYLE-L3 42 0/0 OPEN



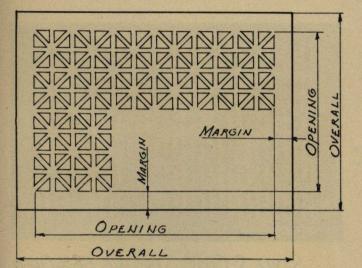


ACTUAL SIZE-STYLE-L3

	1	TAB	LE	0	FC	PE	NIN	6	SIZE	5	
NO OF HOLES	OPENING SIZES										
1	3"	7	24"	13	45"	19	66"	25	87"	31	108"
2	61/2	8	271/2	14	481/2	20	691/2	26	901/2	32	111/2
3	10"	9	31 "	15	52 "	21	73"	27	94"	33.	115"
4	13/2	10	341/2	16	551/2	22	76/2	28	97/2	34	118/2
5	17"	11	38 "	17	59 "	23	80 "	29	101 "	35	122"
6	20/2	12	41/2"	18	621/2	24	831/2	30	104/2	36	1251/2

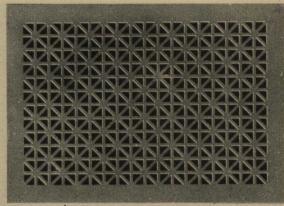
THIRTY

STYLE-LX- GRILLES



GRECIAN DESIGN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.
WIDTH AND HEIGHT.



STYLE - LX- GRILLE

FOR LX2 32 0/0 OPEN FOR ACTUAL SIZE OF UNIT SEE PAGE 28

No OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	No OF HOLES	OPENING
1	13/4"		253/4		493/4		733/4
2	33/4"	14	273/4	26	513/4"	38	753/4
3	53/4"	15	293/4	27	533/4"	39	77 3/4"
4	73/4	16	313/4	28	553/4	40	793/4"
5	93/4	17	3334	29	573/	41	813/4"
6	113/4	18	353/4		593/4	42	8334"
7	133/4"	19	373/4		613/4"	43	8534"
8	153/4"		3934	32	633/4	44	873/4
9	173/4"	21	413/4	33	653/4"	45	893/4
10	193/4"	22	4334"		673/4		913/4
11	213/4	23	453/4	35	693/4	47	9334
12	23 3/4	24	473/4"		7/3/4	48	9534"

TABLES OF OPENING SIZES

FOR LX- 46 00 OPEN FOR ACTUAL SIZE OF UNIT SEE PAGE 29

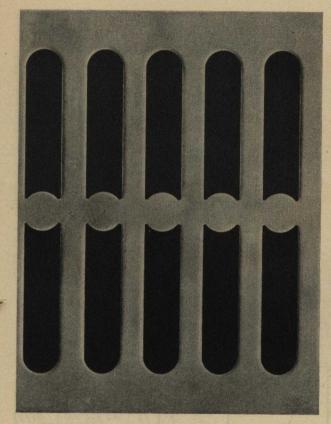
No OF HOLES	OPENING Sizes	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES
1	21/2	13	351/2	25	68/2
2	5/4	14	38/4	26	71/4"
3	8 "	15	41"	27	74 "
4	103/4	16	433/4	28	76 3/4
5	131/2	17	461/2	29	791/2
6	161/4	18	491/4	30	821/4
7	19 "	19	52 "	31	85 "
8	213/4	-20	543/4	32	873/4
9	241/2"	21	571/2	33	901/2
10	27/4"	22	60/4	34	931/4
11	30 "	23	63	35	96 "
12	323/4	24	653/4	36	983/4

THIRTY-ONE

FOR LX3 - 46 0/0 OPEN FOR ACTUAL SIZE OF ONIT SEE PAGE 30

NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES
1	3"	13	423/4	25	821/2
2	65/6	14	46/16	26	853/6
3	95/8	15	493/8"	27	891/8
4	1215/6	16	521/6	28	927/16
5	16/4	17	56"	29	95 3/4"
6	199/16	18	595/6	30	991/16
7	2278	19	625/8	31	1023/8
8	263/16	20	65196	32	1051/16
9	291/2"	21	691/4	33	109"
10	32/16	22	729/16	34	1125/16
11	36/8	23	7578	35	1155/8
12	397/6	24	79.3/6	36	118 19/6

STYLE - S VERTICAL SLOTS



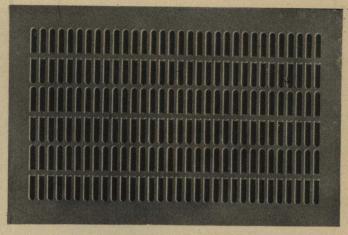
ACTUAL SIZE STYLE S

STYLE S - 50%



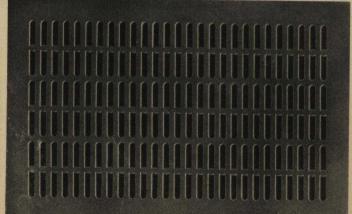
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

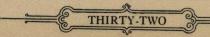
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENINGOR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT.
WIDTH AND HEIGHT.



STYLE S-CLOSE SPACING 56% OPEN

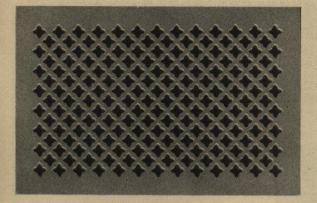
STYLE S-NORMAL SPACING 50% OPEN





STYLE - V- GRILLE

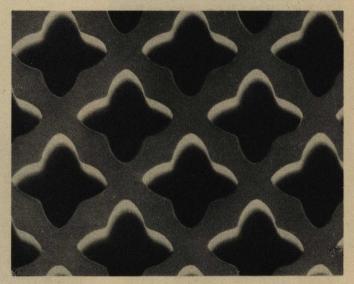
GOTHIC DESIGN (SMALL)



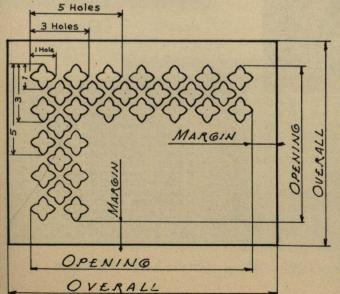
STYLE - V- GRILLE 540/0 OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.
WHEN OR OERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,

IF SCREW HOLES ARE WANTED, KIND OF FINISH, WHICH DIMENSIONS REPRESENT WIOTH AND HEIGHT.



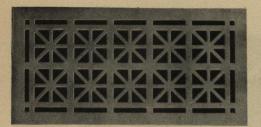
ACTUAL SIZE. STYLE.V. 5400 OPEN



NO OF HOLES	OPENING SIZE	No OF HOLES	OPENING SIZE	NO OF HOLES	OPENING SIZE.	No OF HOLES	OPENING SIZE	No OF HOLES	OPENING SIZE	No OF HOLES	OPENING SIZE		OPENING SIZE	0	OPENING SIZE
1	1"	17	12"	33	23 "	49	34 "	65	45 "	81	56"	97	67"	113	78 "
3	23/8"	19	13%	35	243%	51	353/8	67	463/8	83	573/8	99	683%	115	793/8
5	334"	21	14%	37	25 3/4	53	3634		473/4"	85	583/4	101	6934	117	803/4
7	518	23	1618"	39	27/8	55	3818"	7/	4918	87	6018	103	71/8	119	8218
9	61/2"	25	171/2"	41	28/2"	57	391/2"	73	501/2	89	61/2	105	721/2"	121	831/2
11	7%"	27	18%	43	29%	59	40%	75	5/1/8	91	62%	107	737/8	123	84%
13	9/4"	29	20%	45	31/4	61	42/4	77	53/4		64/4	109	75/4"	125	86/4
15	10%	31	215/8	47	32 5/8	63	43 %	79	54%	95	65 %	111	76%	127	87%

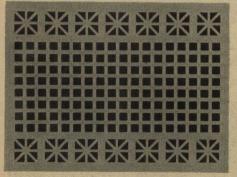


Grilles with Border Design

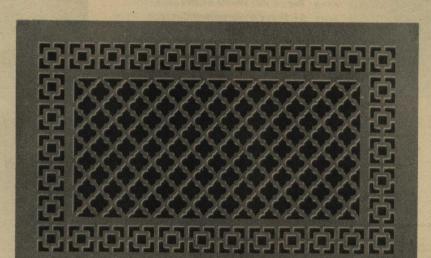


Style NL-45% Open

On this page and the next one are shown a few designs with borders which are combinations of our standard designs.

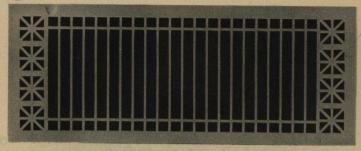


Style LK-45% Open



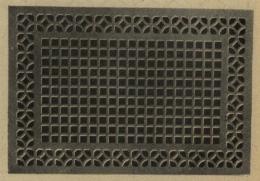
Style AC-60% Open

Designs with borders are much less expensive than similar designs in cast iron or bronze.

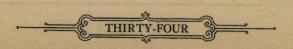


Style LT-71% Open

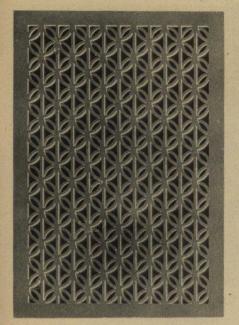
The actual sizes of units can be determined by referring to the preceding pages where each design is illustrated and described.



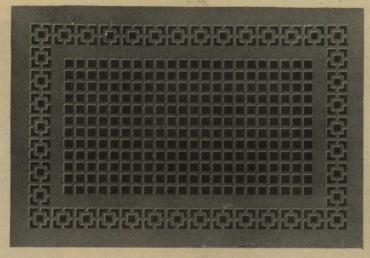
Style MK-55% Open



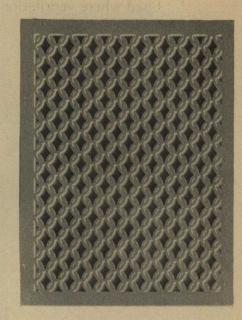
Grilles of Special Design



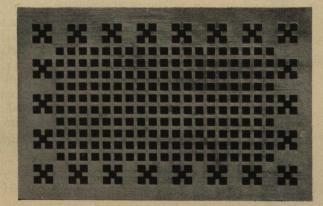
Style QQ



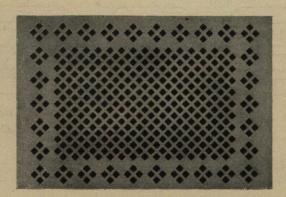
Style AK-50% Open



Style JJ



Style KK-45% Open



Style DD-45% Open



Fixed Louvers

Used where ventilation is wanted without a view beyond the grille. Furnished in No. 16 gauge steel or bronze.



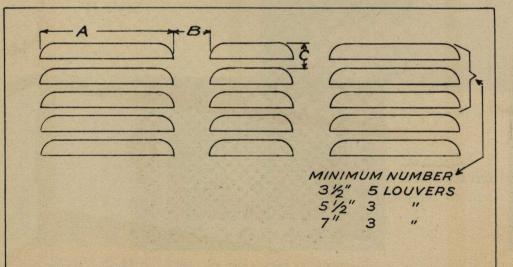
7" Louver



5½" Louver



3½" Louver



Dimension A.... $3\frac{1}{2}$ ", $5\frac{1}{2}$ " or 7"

Dimension B....134" minimum for 3½" louver 2½" minimum for 5½" louver 2½" minimum for 7" louver Wherever 3½" and 5½" or 3½" and 7" louvers are adjacent the 1¾" minimum may be used.

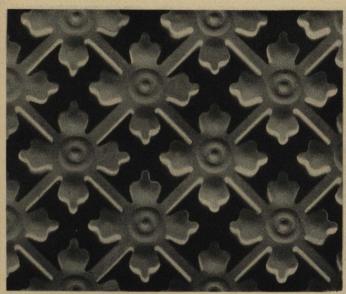
Dimension C....Must always be 1".



GRILLES OF PERFORATED METAL

Style Y Embossed Grille

THIRTY-SEVEN



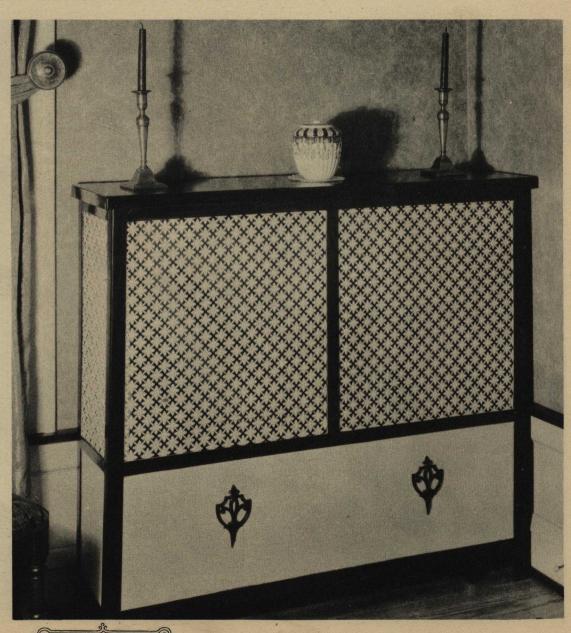
Actual Size Style Y Punched & Embossed 45% Open

This is a design which is a favorite for enclosing radiators, because of its attractive and distinctive appearance and also its high percentage of open area.

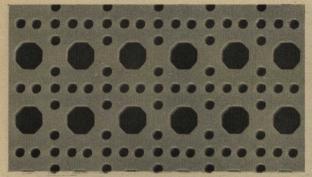
It is made of No. 20 gauge and can be furnished in sheets as large as 42" x 120" but can be cut to smaller size pieces if desired.

The metal used is of the best quality suitable for any finish.

This grille cannot be furnished with blank margins so the edges must always be covered when grille is installed.



Style P Metal Cane (Perforated)



Actual Size Style P Metal Cane 36% Open

This design is used extensively for radiator grilles and enclosures, as well as in metal beds, electric refrigerators, ferneries and other furniture.

Note that our cane design is made up with the large holes true octagons and not rounds. This gives the material a much better appearance. We use only the best quality of steel which will take fine finishes. Design can also be furnished in bronze.

This design can be furnished in sheets as large as 42" x 120" in gauges ranging from No. 26 to No. 16. It is carried in a number of stock sizes in various gauges.

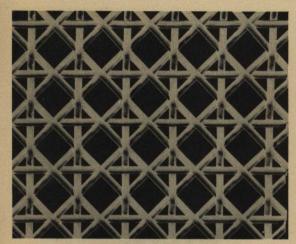
Special grilles of this design can be made to order with blank margins.





GRILLES OF PERFORATED METAL

Style W Metalace (Woven Metal Strands)



Actual Size Style W Woven Cane 35% Open

This design is of woven strands of steel or bronze and is an excellent imitation of the natural woven cane.

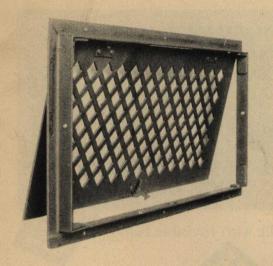
It is carried in stock in rolls of 50 lineal feet by 36" wide but can be cut to any size pieces and when so furnished we flatten the pieces so that they will present a surface free from buckles when installed.

Metalace cannot be furnished with smooth edges so provision should always be made for fastening and covering up the edges.





Screw Holes and Frames

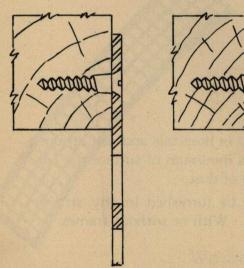


Unless specified, we do not put in screw holes or fit with frames, but we are prepared to do this work if desired.

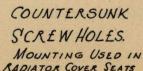
There are many different ways in which grille frames can be made, but we show only a few of the commonly used ones here.

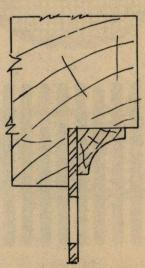
When screw holes are put in they are evenly spaced on about 12 inch centers.

Our frames are carefully made and are thoroughly workmanlike in every detail. In ordering frames specify them by the type letter shown on following sketches



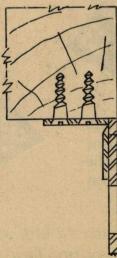
COUNTERSUNK SCREW HOLES. USUAL TYPE OF MOUNTING





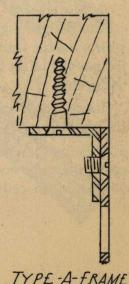
NO SCREWHOLES.

GRILLE HELD BY WOOD MOULD.



NO FRAME.

GRILLE HINGED TO WOOD BUCK OR FRAME

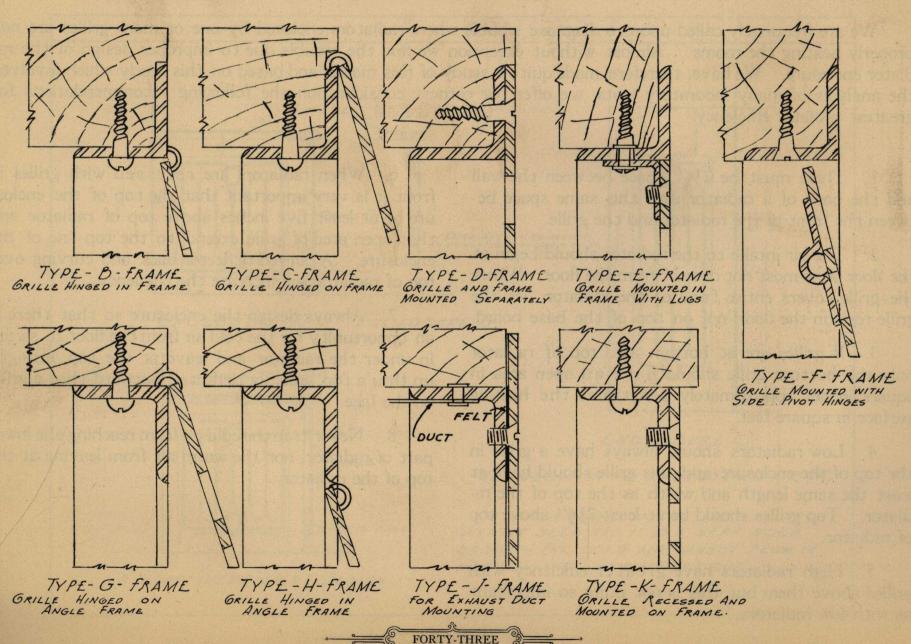


PERMANENT FRAME
REMOVABLE GRILLE



GRILLES OF PERFORATED METAL

Additional Frame Designs.



DESIGN OF GRILLE ENCLOSURES FOR RADIATORS

We are frequently called upon to diagnose trouble where radiators enclosed by one or more grilles are not properly heating the rooms. Almost without exception we find the trouble due to improper design of the radiator enclosure. We have, therefore, made quite a study of this matter and based on this study which involved the analysis of many laboratory tests, we offer for earnest consideration the following recommendations for greatest radiator efficiency.

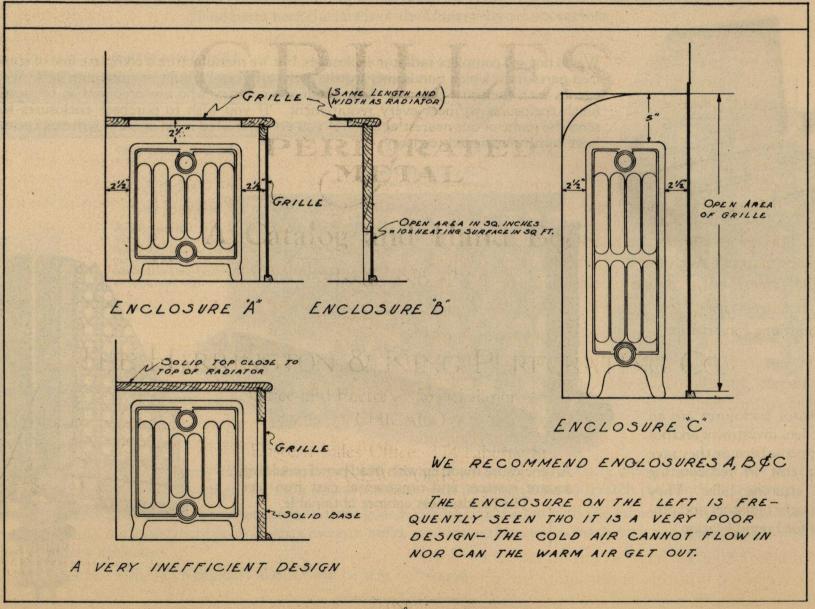
- 1. There must be $2\frac{1}{2}$ " space between the wall and the back of a radiator and this same space between the front of the radiator and the grille.
- 2. The air intake to the radiator should begin at the floor or at most not over 2" from the floor. Where the grille covers entire face of the radiator, let the grille rest on the floor, not on top of the base board.
- 3. If grilles are at bottom and top of radiator only the bottom grille should have an open area in square inches approximately ten times the heating surface in square feet.
- 4. Low radiators should always have a grille in the top of the enclosure and this grille should have at least the same length and width as the top of the radiator. Top grilles should be at least $2\frac{1}{2}$ " above top of radiator.
- 5. High radiators have greater efficiency with grilles above them but this is not quite so important as with low radiators.

- 6. When radiators are recessed with grilles in front it is very important that the top of the enclosure be at least five inches above top of radiator and that open area of grille extend to the top line of the enclosure. A curved deflector back and curving over top of radiator will increase the efficiency.
- 7. Always design the enclosure so that there is an opportunity for the cold air from the floor to sweep in under the radiator and leave at the top, straight up thru a top grille, or deflected outward thru a grille on the face.
- 8. Never trap the cold air from reaching the lower part of radiator, nor the warm air from leaving at the top of the radiator.



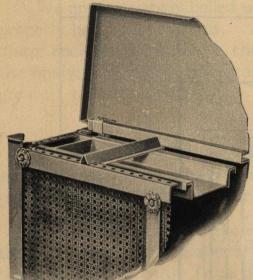


SUGGESTED DESIGNS FOR ENGLOSING RADIATORS





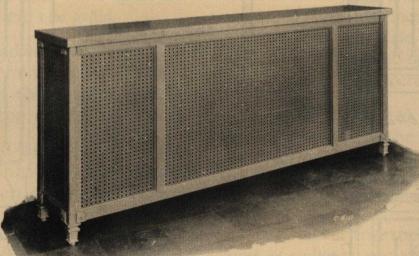
Standardized Parts for the Construction of Radiator Enclosures



Showing hinged top, water pan and frame construction.

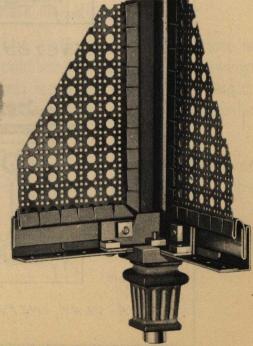
Radiator enclosures are an excellent investment and not an expense because they save their cost in redecorating and cleaning bills. They hide ugly radiators and provide for humidification.

We do not sell complete radiator enclosures, but we manufacture a complete line of standardized parts from which handsome, sturdy enclosures can be built at minimum cost. We have agents with exclusive territory throughout the country who are prepared to fabricate and finish enclosures to meet every requirement. If you wish to purchase enclosures we will send the name of our nearest agent. If you are interested in an agency, write us because we have some unassigned territory.



An enclosure made up with bead panel moulding, square rosettes and ornamental cast iron feet.

The handsomest cabinet obtainable.



Showing inside corner construction and ornamental foot which is adjustable for height.

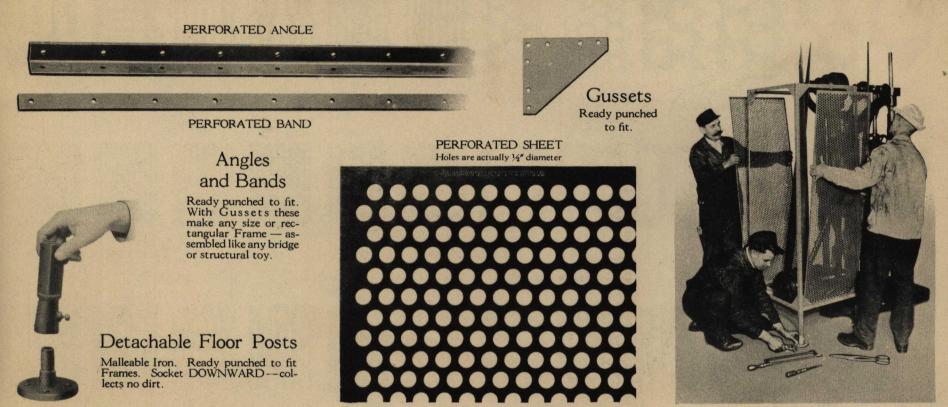




Standardized Parts for the Construction of Machinery Guards

The most economical material from which to make all types of Belt and Machine Guards.

These parts bear the labels of the Underwriters Laboratories.



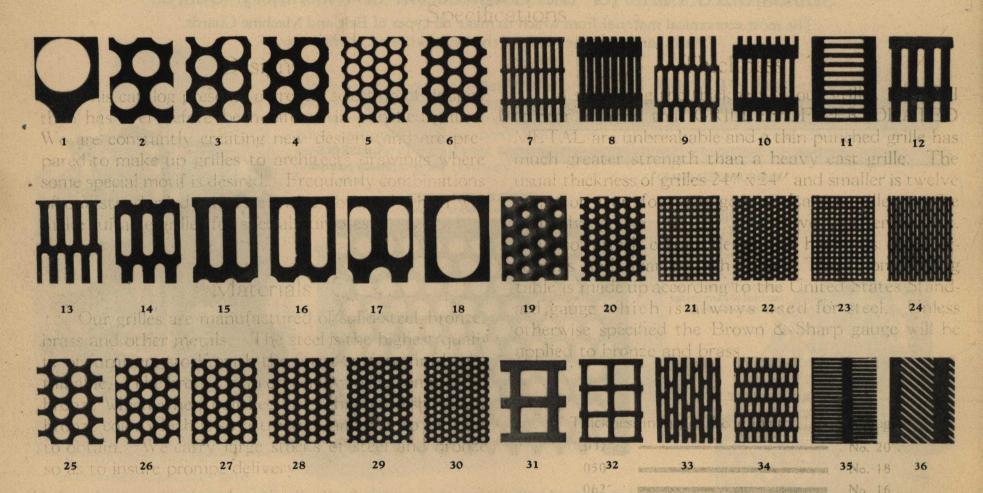
This material can be cut to any desired shape and will not tear or stretch. It is easily cleaned, and will not catch or hold particles of waste or cloth used in wiping. It has a smooth surface, with no projections to scratch the hands of workmen.

These parts have been designed so that strong sturdy guards can be constructed with the minimum of labor. Guards properly made from these parts are indestructible, are inexpensive to build, provide easy access to machinery and receive quick and positive approval of all safety inspectors.

A special booklet "Belt and Machine Guards" will be sent on request.



Perforated Metals



We are specialists in the manufacture of grilles, but we also manufacture perforated metals of every description ranging in size from .020" diameter to 9" diameter with hundreds of sizes in between.





